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EXAMINER

MARCHESCHI, MICHAEL A

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/724,786

Applicant(s)

PASQUALONI ET AL.

Examiner

Michael A Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12/1/03, 472104, and 472104
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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The disclosure is objected to because of the following informalities:

The specification is objected to because the status of the parent application needs to be updated (abandoned).

Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grumbine et al. (711) in view of Steckenrider et al. and Hampden-Smith et al.

Grumbine et al. teach in column 4, line 60-column 8, line 50, a polishing composition having a pH less than 9 comprising 3-45% abrasive dispersion of fumed silica having a size of less than 1 micron, an oxidizer (hydrogen peroxide), a corrosion inhibitor (benzotriazole as shown in table 1 or obvious from the description in column 5, lines 35-45), a pH adjustor (nitric acid as shown in the examples). The composition can contain surfactants, stabilizers and any other well know polishing additives. Amounts for the above components are also defined. Column 10, lines 1-9 defines a method for making the composition which comprises mixing a silica dispersion with the additives (oxidizer) and filtering the dispersion. Example 3 shows that the composition is filtered at least 3 times

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Steckenrider et al. teach in section [0034] and the claims, that amines (triethanolamine) are well known polishing additives to be added to tungsten polishing slurries in the claimed amount.

Hampden-Smith et al. teach in sections [0243]-[0244] that ammonia (complexing agent) is well known polishing additive to be added to tungsten or tantalum polishing slurries.

The primary reference teaches a polishing composition which comprises all of the claimed components in the claimed amounts and although the reference does not define the “large particle count...of a size greater than about 0.5 microns”, as can be seen from the reference size of less than 1 micron, the particle size of the abrasives according to the reference can include particle with sizes above 0.5 microns. In view of this, the broad interpretation of the distribution of this reference encompasses and therefore makes obvious sizes which can meet the claimed criteria absent evidence to the contrary (critical evidence). The reference uses a corrosion inhibitor and table 1 shows that this can be benzotriazole. In the alternative, benzotriazole is encompassed and therefore obvious from the description of this component in column 5, lines 35-45. The amount of the pH adjusting compound and the specific pH adjusting compound are obvious because it is the examiners position that the claimed amount is within the scope of the skilled artisan in order to adjust the pH to the range defined by the reference. It is also the examiners position that the specific type of pH adjustor is obvious and one skilled in the art would have found the use of any other organic acid obvious to adjust the pH to fall within the reference range. The use of an amine or ammonia in the composition according to the primary reference would have been obvious because this reference states that **any other well known polishing additive may be used**, and since ammonia and amines are well known polishing

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slurry additives, as shown by the secondary references, the use thereof is obvious and well within the level of ordinary skill in the art. With respect to the amount of ammonia used, the claimed amount would have been obvious because one skilled in the art would have known that this amount is beneficial for a complexing agent (ammonia) when admixed into a polishing slurry composition in the absence of any evidence showing the contrary. Example 3 of the primary reference shows that the composition is filtered at least 3 times. In the alternative, multiple filtration steps are obvious to the skilled artisan because this will maximize the filtration of the slurry by removing the maximum unwanted contaminants from the slurry prior to use.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. (306) in view Hampden-Smith et al.

Kaufman et al. teach in column 4, line 57-column 10, line 62, a polishing composition having a pH of 2-12 comprising 3-45% abrasive dispersion of fumed silica having a size of less than 1 micron, an oxidizer (hydrogen peroxide), a film forming agent (benzotriazole), an amine (triethanolamine), a pH adjustor (any known acid base or amine). The composition can contain surfactants, stabilizers and any other well known polishing additives. Amounts for the above components are also defined.

The primary reference teaches a polishing composition which comprises all of the claimed components in the claimed amounts and although the reference does not define the "large particle count...of a size greater than about 0.5 microns", as can be seen from the reference size of less than 1 micron, the particle size of the abrasives according to the reference can include particle with sizes above 0.5 microns. In view of this, the broad interpretation of the

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distribution of this reference encompasses and therefore makes obvious sizes which can meet the claimed criteria absent evidence to the contrary (critical evidence). The amount of the pH adjusting compound and the specific pH adjusting compounds are obvious because it is the examiners position that the claimed amount is within the scope of the skilled artisan in order to adjust the pH to the range defined by the reference. It is also the examiners position that the specific type of pH adjustor is obvious and one skilled in the art would have found the use of any organic acid obvious to adjust the pH to fall within the reference range. The use of ammonia in the composition according to the primary reference would have been obvious because this reference states that **any other well known polishing additive may be used**, and since ammonia is a well known polishing slurry additive, as shown by the secondary reference, the use thereof is obvious and well within the level of ordinary skill in the art. With respect to the amount of ammonia used, this claimed amount would have been obvious because one skilled in the art would have known that this amount is beneficial for a complexing agent (ammonia) when admixed into a polishing slurry composition in the absence of any evidence showing the contrary. In the alternative, the reference states that any known base can be used to adjust the pH and this reads on the use of ammonia.

Claims 1-9, 28, 29 and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burke et al. (705) in view of Kaufman et al. (306).

Burke et al. teach in figures 1-2 and in column 3, line 17-column 4, line 22, a polishing composition comprising an abrasive having a size within the claimed range, an oxidizer, a surfactant and water. The reference also teaches a method for making the slurry.

The primary reference teaches a polishing composition and although the reference does not literally define the “large particle count...of a size greater than about 0.5 microns”, as can be seen from the reference size distribution (between 0.2 and 0.7 microns and the teachings in claim 1), the particle size of the abrasives according to the reference can include particles with sizes above 0.5 microns. In view of this, the broad interpretation of the distribution of this reference encompasses and therefore makes obvious sizes which can meet the claimed criteria absent evidence to the contrary (criticality). In addition, from the figures, the reference also suggests the “particle count” which encompasses and therefore makes obvious the instant limitation. Although this reference does not use an abrasive dispersion, no patentable distinction is seen to exist because when the abrasive is mixed with water, and a surfactant, a dispersion is produced. In the alternative, the use of an abrasive dispersion would have been obvious to the skilled artisan because this is a well known way to incorporate the abrasive into a polishing composition, as shown by Kaufman et al. The primary reference states that silica is used as the abrasive and column 4, lines 5-6 and the particle sizes defined suggest that the silica is colloidal, thus encompassing fumed silica. In the alternative, the primary reference teaches silica, in general, and this encompasses fumed silica. The amount of abrasive and oxidizer used is obvious to the skilled artisan because the claimed amounts are conventional amounts for these components as shown by the secondary reference. With respect to the pH, it is the examiners position that since all compositions have a pH value, the reference composition will have a pH which falls within the scope of instant claim in the absence of any evidence showing the contrary. With this being obvious, the specific type of pH adjustor is obvious and one skilled in the art would have found the use of any organic acid obvious to adjust the pH. With respect to

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the method of making the slurry, the reference teaches filtering the slurry. Although the filtering step takes place before the addition of the abrasive particle, no distinction is seen to exist because “reversing the order of steps in a process does not impart patentability **when no unexpected result is obtained**. Ex parte Rubin (POBA 1959) 128 U.S.P.Q. 440, Cohn v. Comr. Pats. (DCDC 1966) 251 F Supp 378, 148 U.S.P.Q. 486. **Applicants are required to show unexpected results to overcome this case law**. In the alternative, filtering the slurry after the abrasive is mixed therein is obvious to the skilled artisan because this will remove any unwanted contaminants from the slurry prior to use. Multiple filtration steps is also obvious to the skilled artisan because this will maximize the filtration of the slurry by removing the maximum unwanted contaminants from the slurry prior to use.

Claims 1-11 and 17-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fang (227) in view of Kaufman et al. (306).

Fang teaches in column 1, line 65-column 5, line 68, a polishing composition having a pH of at least 7 comprising an abrasive having a size within the claimed range, an oxidizer (peroxide, i.e. hydrogen peroxide being obvious), ammonia, a surfactant, water a carboxylic acid and a pH adjustor.

The primary reference teaches a polishing composition and although the reference does not define the “large particle count...of a size greater than about 0.5 microns”, as can be seen from the reference size distribution, the particle size of the abrasives according to the reference can include particles with sizes that meet the claimed criteria. In view of this, the broad interpretation of the distribution of this reference encompasses and therefore makes obvious sizes

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which can meet the claimed criteria absent evidence to the contrary (critical evidence). Although this reference does not use an abrasive dispersion, no patentable distinction is seen to exist because when the abrasive is mixed with water, a dispersion is produced. In the alternative, the use of an abrasive dispersion would have been obvious to the skilled artisan because this is a well known way to incorporate the abrasive into a polishing composition, as shown by Kaufman et al. The primary reference states that silica is used in an amount which is within the claimed amount and the particle sizes defined suggest that the silica is colloidal, thus encompassing fumed silica. In the alternative, the primary reference teaches silica, in general, and this encompasses fumed silica. The reference uses ammonia and the reference states that any suitable amount can be used, thus broadly reading on the claimed in the absence of any evidence showing the contrary. The amount of the pH adjusting compound is obvious because it is the examiners position that the claimed amount is within the scope of the skilled artisan in order to adjust the pH to the range defined by the reference. It is also the examiners position that the specific type of pH adjustor is obvious and one skilled in the art would have found the use of any other organic acid obvious to adjust the pH to fall within the reference range.

Claims 1-6, 17 and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (649) in view of Kaufman et al. (306).

Roberts et al. teach in column 3, line 5-column 4, line 15, a polishing composition having the claimed pH comprising an abrasive having a specified size distribution, a pH adjustor, water and a carboxylic acid.

The primary reference teaches a polishing composition and although the reference does not define the “large particle count...of a size greater than about 0.5 microns”, as can be seen from the reference size distribution, the particle size of the abrasives according to the reference can include particles with sizes that meet the claimed criteria. In view of this, the broad interpretation of the distribution of this reference encompasses and therefore makes obvious sizes which can meet the claimed criteria absent evidence to the contrary (critical evidence). Although this reference does not use an abrasive dispersion, no patentable distinction is seen to exist because when the abrasive is mixed with water, a dispersion is produced. In the alternative, the use of an abrasive dispersion would have been obvious to the skilled artisan because this is a well known way to incorporate the abrasive into a polishing composition, as shown by Kaufman et al. The primary reference states that silica is used and the particle sizes defined suggest that the silica is colloidal, thus encompassing fumed silica. In the alternative, the primary reference teaches silica, in general, and this encompasses fumed silica. With respect to the amount of abrasive, one skilled in the art would have known that the claimed amount is conventional for polishing slurries and therefore is obvious to the skilled artisan. The amount of the pH adjusting compound is obvious because it is the examiners position that the claimed amount is within the scope of the skilled artisan in order to adjust the pH to the range defined by the reference. It is also the examiners position that the specific type of pH adjustor is obvious and one skilled in the art would have found the use of any other organic acid obvious to adjust the pH to fall within the reference range.

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Claims 1-6 and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brancaleoni et al. (010) in view of Kaufman et al. (306).

Brancaleoni et al. teach in column 3, line 45-column 5, line 68 and the claims, a polishing composition having the claimed pH comprising fumed silica having a specified size distribution, a pH adjustor, water and a surfactant.

The primary reference teaches a polishing composition and although the reference does not define the "large particle count...of a size greater than about 0.5 microns", as can be seen from the reference size distribution, the particle size of the abrasives according to the reference can include particles with sizes that meet the claimed criteria. In view of this, the broad interpretation of the distribution of this reference encompasses and therefore makes obvious sizes which can meet the claimed criteria absent evidence to the contrary (critical evidence). Although this reference does not use an abrasive dispersion, no patentable distinction is seen to exist because when the abrasive is mixed with water, a dispersion is produced. In the alternative, the use of an abrasive dispersion would have been obvious to the skilled artisan because this is a well known way to incorporate the abrasive into a polishing composition, as shown by Kaufman et al. The amount of the pH adjusting compound is obvious because it is the examiners position that the claimed amount is within the scope of the skilled artisan in order to adjust the pH to the range defined by the reference. It is also the examiners position that the specific type of pH adjustor is obvious and one skilled in the art would have found the use of any other organic acid obvious to adjust the pH to fall within the reference range.

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Claims 1-11, 17 and 22-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Currie et al. (685) in view of Kaufman et al. (306).

Currie et al. teach in the abstract, column 3, line 60—column 8, line 47, a polishing composition having the claimed pH comprising an abrasive (spherical silica) having a specified size distribution, an oxidizer (amount defined), a pH adjustor, a stabilizer, water and a carboxylic acid.

The primary reference teaches a polishing composition and although the reference does not define the “large particle count...of a size greater than about 0.5 microns”, as can be seen from the reference size distribution, the particle size of the abrasives according to the reference can include particles with sizes that meet the claimed criteria. In view of this, the broad interpretation of the distribution of this reference encompasses and therefore makes obvious sizes which can meet the claimed criteria absent evidence to the contrary (critical evidence). Although this reference does not use an abrasive dispersion, no patentable distinction is seen to exist because when the abrasive is mixed with water, a dispersion is produced. In the alternative, the use of an abrasive dispersion would have been obvious to the skilled artisan because this is a well known way to incorporate the abrasive into a polishing composition, as shown by Kaufman et al. The primary reference states that spherical silica is used fumed silica can be spherical absent evidence to the contrary. In the alternative, the primary reference teaches silica, in general, and this encompasses fumed silica. The amount of the pH adjusting compound is obvious because it is the examiners position that the claimed amount is within the scope of the skilled artisan in order to adjust the pH to the range defined by the reference. It is also the examiners position that the specific type of pH adjustor is obvious and one skilled in the art

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would have found the use of any other organic acid obvious to adjust the pH to fall within the reference range.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi et al. (636) in view of Kaufman et al. (306).

Koichi et al. teach in the abstract and sections [0031]-[0054], a polishing composition having the claimed pH comprising fumed silica having a specified size distribution, a peroxide, an anticorrosive agent, a surfactant, amine salts, salts, a chelating agent (complexing agent), a pH adjustor (ammonia, etc.) and water. Amounts for the additives are defined.

The primary reference teaches a polishing composition and although the reference does not define the "large particle count... of a size greater than about 0.5 microns", as can be seen from the reference size distribution, the particle size of the abrasives according to the reference can include particles with sizes that meet the claimed criteria. In view of this, the broad interpretation of the distribution of this reference encompasses and therefore makes obvious sizes which can meet the claimed criteria absent evidence to the contrary (critical evidence). Although this reference does not use an abrasive dispersion, no patentable distinction is seen to exist because when the abrasive is mixed with water, a dispersion is produced. In the alternative, the use of an abrasive dispersion would have been obvious to the skilled artisan because this is a well known way to incorporate the abrasive into a polishing composition, as shown by Kaufman et al. With respect to the specific peroxide (oxidizer) and anticorrosive (film former), the primary reference teaches these additives, in general, and the broad interpretation of the generalized additives encompasses the claimed species. In the alternative, the secondary

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references teaches that the generalized additives of the primary reference are known to include the claimed materials thus making them obvious. The primary reference also states that a chelating agent is added and since a chelating agent can also be referred to as a complexing agent, this makes the claimed limitation obvious. With respect to the specific complexing agents (chelating agents), the primary reference teaches these additives, in general, and the broad interpretation of the generalized additives encompasses the claimed species. In the alternative, the secondary reference teaches that the generalized additives of the primary reference are known to include the claimed materials thus making them obvious. With respect to the use of an amine, this component is obvious to the skilled artisan because the primary reference states that other components can be added and since this is a well known polishing additive, as shown by the secondary reference, its used is obvious. The amount of the pH adjusting compound is obvious because it is the examiners position that the claimed amount is within the scope of the skilled artisan in order to adjust the pH to the range defined by the reference. In addition the reference specifically states that the amount is desired for this function. It is also the examiners position that the specific type of pH adjustor is obvious and one skilled in the art would have found the use of any other organic acid obvious to adjust the pH to fall within the reference range.

Claims 1-11, 17 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hampden-Smith et al. (245) in view of Kaufman et al. (306).

Hampden-Smith et al. teach in sections [0214]-[0221] and [0239]-[0243], a polishing composition comprising silica having a specified size distribution, a peroxide, a surfactant, a complexing agent (ammonia), a pH adjustor and water.

The primary reference teaches a polishing composition and although the reference does not define the “large particle count...of a size greater than about 0.5 microns”, as can be seen from the reference size distribution, the particle size of the abrasives according to the reference can include particles with sizes that meet the claimed criteria. In view of this, the broad interpretation of the distribution of this reference encompasses and therefore makes obvious sizes which can meet the claimed criteria absent evidence to the contrary (critical evidence). Although this reference does not use an abrasive dispersion, no patentable distinction is seen to exist because when the abrasive is mixed with water, a dispersion is produced. In the alternative, the use of an abrasive dispersion would have been obvious to the skilled artisan because this is a well known way to incorporate the abrasive into a polishing composition, as shown by Kaufman et al. With respect to the specific peroxide (oxidizer) and complexing agent, the primary reference teaches these additives, in general, and the broad interpretation of the generalized additives encompasses the claimed species. In the alternative, the secondary reference teaches that the generalized additives of the primary reference are known to include the claimed material thus making them obvious. With respect to the amount of ammonia, one skilled in the art would have known the amount required to make a polishing composition having the most beneficial properties. With respect to the specific abrasive, the primary reference teaches silica, in general, and the broad interpretation of silica encompasses any silica forms (i.e. fumed silica). With respect to the pH, it is the examiners position that since all compositions have a pH value, the

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reference composition will have a pH which falls within the scope of instant claim in the absence of any evidence showing the contrary. With this being obvious, the specific type of pH adjustor is obvious and one skilled in the art would have found the use of any organic acid obvious to adjust the pH.

Claims 1-6, 23, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayashi et al. (864) in view of Kaufman et al. (306).

Nakabayashi et al. teach in the abstract and column 8, lines 1-68, a polishing composition having the claimed pH comprising fumed silica having a specified size distribution (see abstract), a pH adjustor and water.

The primary reference teaches a polishing composition and although the reference does not **literally** define the “large particle count...of a size greater than about 0.5 microns”, as can be seen from the reference size distribution (amount of particles larger than 1 micron), the particle size of the abrasives according to the reference can include particles with sizes above 0.5 microns. In view of this, the broad interpretation of the distribution of this reference encompasses and therefore makes obvious sizes which can meet the claimed criteria absent evidence to the contrary (criticality). In addition, from the abstract, the reference also suggests the “particle count” which encompasses and therefore makes obvious the instant limitation. Although this reference does not use an abrasive dispersion, no patentable distinction is seen to exist because when the abrasive is mixed with water, and a surfactant, a dispersion is produced. In the alternative, the use of an abrasive dispersion would have been obvious to the skilled artisan because this is a well known way to incorporate the abrasive into a polishing

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composition, as shown by Kaufman et al. With respect to the addition of a surfactant, this concept is obvious in order to optimize the dispersion.

In view of the teachings as set forth above, it is the examiners position that the references reasonably teach or suggest the limitations of the rejected claims.

"A reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545, 549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968)". In addition, "A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

"A generic disclosure renders a claimed species prima facie obvious. *Ex parte George* 21 USPQ 2d 1057, 1060 (BPAI 1991); *In re Woodruff* 16 USPQ 2d 1934; *Merk & Co. v. Biocraft Lab. Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1983); *In re Susi* 169 USPQ 423 (CCPA 1971)".

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976)".

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Evidence of unexpected results must be clear and convincing. *In re Lohr* 137 USPQ 548.

Evidence of unexpected results must be commensurate in scope with the subject matter claimed.

In re Linder 173 USPQ 356.

The additional references cited on the 1449 have been reviewed by the examiner and are considered to be art of interest since they are cumulative to or less than the art relied upon in the above rejections.

Any foreign language documents submitted by applicant has been considered to the extent of the short explanation of significance, English abstract or English equivalent, if appropriate.

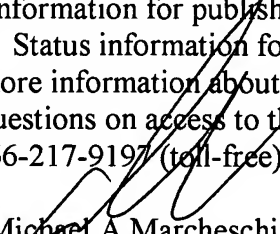
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L Bell can be reached on (571) 272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

1/27/05

MM


Michael A Marcheschi
Primary Examiner
Art Unit 1755